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FRESH VEGETABLES IN WINTER

BY R. B. CRUICKSHANK

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Ah! on Thanksgiving day, when from East and from West,
From North and from South come the pilgrim and guest,
When the gray-haired New Englander sees round his board
The old broken lines of affection restored,
When the care-wearied man seeks his mother once more,
And the worn matron smiles where the girl smiled before,
What moistens the lip and brightens the eye?
What calls back the past, like the rich pumpkin pie?

J. G. WHITTIER.

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FRESH VEGETABLES IN WINTER

BY R. B. CRUICKSHANK

To most people, especially those in the cities, the thought of fresh vegetables in winter brings visions of high prices. Many, therefore, are obliged to do without much of this class of foods that they otherwise would use. The city consumer must take recourse to the few vegetables that are commonly found on the market during winter and which are reasonable in cost. To supply his table with a large variety, he must wait until summer comes again.

The family on the farm, however, at least as far as having fresh vegetables in winter is concerned, finds itself in happier conditions. This applies also when the home is situated on a lot large enough to afford room for a sufficiently generous garden. Yet there are many, even when the opportunity of having fresh vegetables the year round is present and apparent, who do not avail themselves of it. They fail to obtain from their gardens their full complement, because they do not take the trouble to store for winter use the vegetables that they grow. Much of the product of the farm garden is often allowed to go to waste for lack of suitable storage facilities. As a result, the vegetables found on the tables of too many farm homes are too few in kind and too little in amount. It is true also that the consumption of commercially canned goods on the farm is increasing rapidly, because fewer vegetables are being grown and stored there for home use.

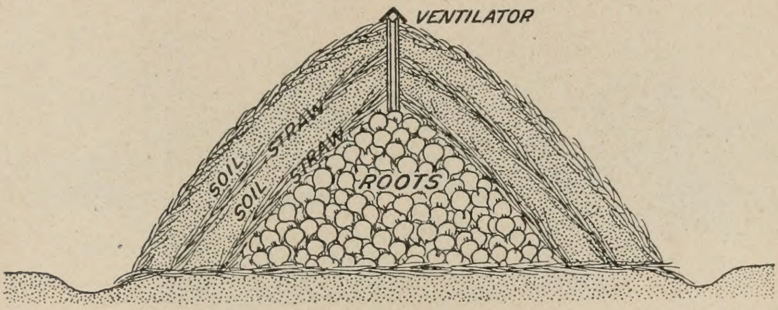
It is entirely possible for the country women to have as many as fifteen or twenty different vegetables kept in a fresh condition, upon which she may draw to furnish her table with healthful and appetizing food. These are in addition to those she has dried or "put up." The extent of the variety or amount will depend of course upon the interest the "head" of the house takes in growing them and in furnishing suitable storage quarters. Among the vegetables which may be had during winter in a fresh condition are potatoes, turnips, beets, cabbage, carrots, celery, parsley, parsnips, onions, horseradish, rutabagas, kohlrabi, salsify, sweet potatoes, pumpkins, squashes, and a few less important ones. Other vegetables may be grown in the garden till late fall or early winter and started again very early in the spring. Rhubarb and asparagus may be grown in the cellar without trouble, furnishing a continuous supply during the cold months.

There are, thus, two principal ways in which the family in the country may have fresh vegetables during the season of ice and snow: (1) proper storing and (2) forcing. The forcing referred to is that done in the cellar and not in greenhouses. The cold frame, however, may be utilized to lengthen the growing season, giving an early start and a late finish. Suitable conditions for success with these methods can be found or made on most farms.

STORAGE

When it is expected to store vegetables, the time of planting must be planned in order to bring each particular one to maturity at about the right season. Storing should follow shortly after the harvesting.

Successful storage depends on the proper selection of the specimens to be kept and on proper conditions in the place of storage. Bruised and broken vegetables should never be stored, as decay is almost sure to develop in them and spread to others. Only perfectly sound specimens should be selected. The storage place should allow plenty of fresh air and maintain the right degree of temperature and the proper condition of moisture. Most vegetables require a temperature slightly above freezing, but squashes and pumpkins keep better where a temperature of 50° to 60° is maintained. The root crops must be kept moist, in order to preserve their plumpness, though too much moisture is detrimental and conducive to disease and rot. Some other vegetables require dryness for best results. Specific directions for storing the various vegetables are given farther on.

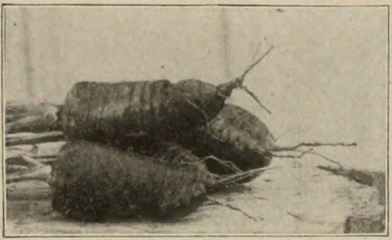


Cross section of an easily constructed pit for roots

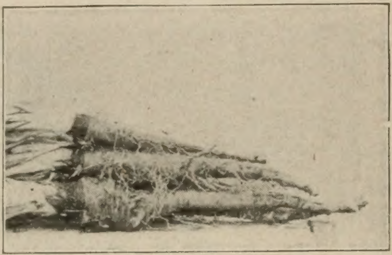
PLACES FOR VEGETABLE STORAGE

Under country conditions there are several ways in which vegetables may be stored conveniently and successfully. These include the employment of the house cellar, outdoor cellars, or caves, pits, trenches, and cold frames may be used to advantage with but little cost in time or labor.

House Cellars.—The house cellar frequently offers good conditions for the storage of vegetables and is used for the purpose more or less by many families. However, when there is a furnace located within the cellar the air becomes too dry and warm, except probably for pumpkins, squashes and sweet potatoes, and it is necessary to partition off a storage room. The partition wall may be built of wood and heavy paper, of brick, or of concrete. The wall will be more satisfactory if it is double, allowing for some insulating material or an air space in the middle. Ventilation may be procured in the vegetable room by having an opening near the floor through which cold air may be admitted and another opening near the ceiling through which the air may pass outwards. As a further precaution and especially where a special vegetable room is not provided, the furnace pipes should be covered with asbestos, thereby preventing so much heat from radiating into the cellar and delivering more heat in the rooms above.



Carrots

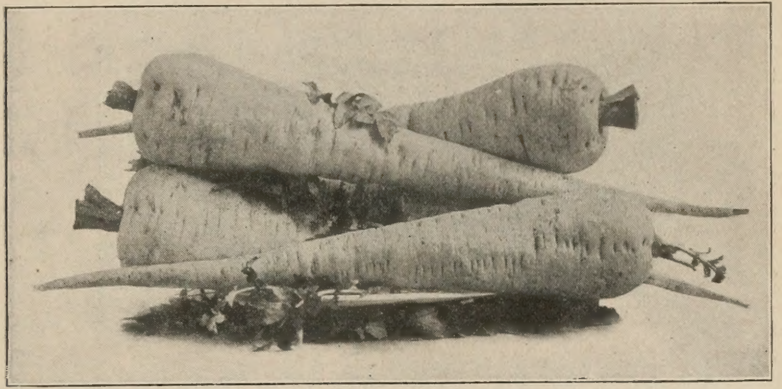


Salsify

Outdoor Cellars or Caves.—Cellars or caves can be dug in a hillside and may afford excellent environment for the keeping of vegetables during the winter. Care must be taken to see that the site is well drained, as too much moisture must be avoided.

Something more than a mere hole in the ground closed up with loose boards may be constructed if the worker can make and handle concrete. The concrete is used to form the top, sides, and floor of a room of sufficient size to hold the quantity of vegetables and fruit that it is expected to store. Such a storage place should be high enough for a man in it to stand erect. A few essentials of such a storage house or cave are, that a row of tile should be laid sloping downwards but coming to the surface of the ground 40 to 50 feet from the cave, and the other end running under and opening into the floor of the cave. A tile or two should project above the roof to act as ventilators. This arrangement of tile provides a draft and keeps up a good circulation of air which is essential to successful storage. The concrete walls and top are then covered with earth, only the door remaining bare. The air which passes through the row of tile will be cooler in the fall but much warmer in winter than the outside temperature, thus keeping the temperature of the cave nearly uniform. In severely cold weather, the outer opening may be partly closed. A temperature just above freezing should be maintained as nearly as possible for best results.

Pits.—Pits are sometimes dug in level ground for storage purposes. These may be of any necessary size and should always be constructed in the well-drained spots. The walls should be made of wood, brick, or concrete and the roof of boards upon which is placed a thick covering of strawy manure. The pit need not be deep, about 2 feet being an average depth. Provision for ventilation must be made by using tile or wooden shafts which open out through the material covering the roof. These pits are very inexpensive and keep vegetables in excellent condition.



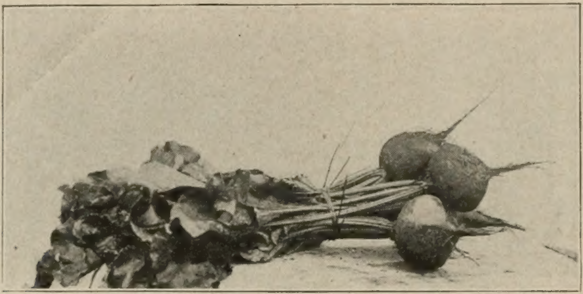
After parsnips are frosted they may be used all winter.

Trenches.—Vegetables, especially celery and cabbage, are often kept in trenches. The celery trench is narrow and boards are placed along both sides within which the celery is bunched very closely. Another board is placed over the celery and the whole box-like trench covered with earth and straw. By making the top boards short, small quantities of celery may be taken out when wanted, though hard freezing weather makes it somewhat difficult. The temperature is regulated by opening or closing the ends of the trench depending on the warmth or coldness of the atmosphere.

Cabbage trenches may be made by digging a deep furrow. In this is laid a row of cabbage, heads down, and another furrow thrown from the side covers them to the depth of a foot or so which is usually sufficient. If necessary, strawy manure may be used as a further protection. Cabbage for home use may be removed during warm days, and kept in a cool place.

Cold Frames.—Some farmers make use of cold frames and these are well adapted for storing celery, turnips, parsnips, beets and the like. The celery should be stood up with the roots imbedded in loose earth. Earth is banked around the frames and boards, mats, and other material are placed on the roof to prevent freezing.

Burying.—Many vegetables are stored for winter and early spring use by simple burying. Cabbage and various root crops are laid on the ground and covered with the plow or shovel or both with about a foot of soil and if necessary with some other protective material like strawy litter or manure. Celery may be banked up gradually as the cold weather comes or until it is practically covered with earth, after which straw or leaves are added. Some crops like parsnips, salsify, and horseradish may be left in the ground where they grow all winter without danger.



Beets for summer

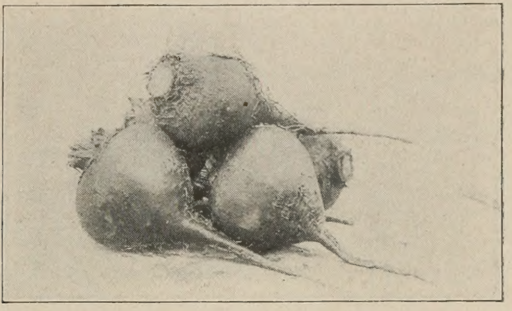
DIRECTIONS FOR STORAGE

Root Crops.—The numerous root crops can be considered together, because, with the exception of minor details, the storage methods are very similar. These vegetables all require a cool temperature, one just above freezing if possible. Most of them will stand being frozen slightly and some may be frozen hard without deterioration. They should be kept moist to prevent them from drying and withering. Ventilation when possible should be provided.

When these vegetables are harvested care should be taken not to bruise them. This is especially true with beets. Their quality is greatly diminished by bleeding. The tops should be cut off at about 1½ inches from the root. Beets, carrots, and other of the more tender roots should be harvested and housed before frost.

It seems to be a common notion that parsnips must be left in the ground all winter before they are good to use. These roots may be dug after one or two sharp frosts and stored with other similar vegetables. Then they may be had all winter instead of just in the spring, salsify and horseradish may be treated similarly.

If the root crops are to be stored in a cellar, some clean sand should be used if it can be obtained. The vegetables are buried in the sand and kept moist by occasional sprinkling. Where sand cannot be secured, damp excelsior is sometimes used.



Beets for winter

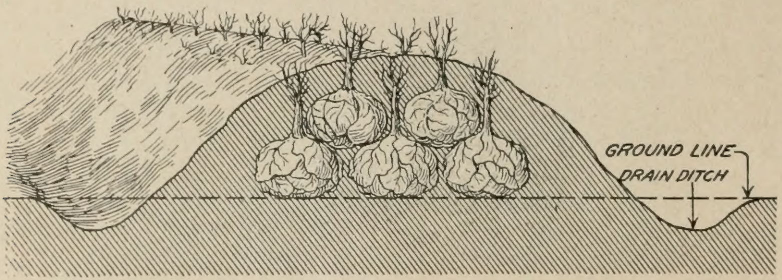
As previously stated such vegetables as turnips, rutabagas, beets, parsnips, salsify, horseradish, carrots and kohlrabi may be kept, not only in the cellar, but also in caves, pits, trenches, and the other ways mentioned in the preceding pages.

Cabbages.—Those cabbage heads which are just matured are best for keeping. Immature and overripe heads should be used first. The flat varieties are not so good for storage purposes as are the tighter ball-head kinds.

Cabbage must be kept cool and moist, but must not be allowed to freeze hard. While cabbage may be kept in the house cellar, owing to its offensive odor when decay begins, most people prefer to keep it out doors in caves, pits, and trenches.

Celery.—Celery is one of the most desirable vegetables to have in winter, because it can be used in so many delicious dishes, as well as eaten raw. It should be harvested before heavy freezing occurs. It may be stored in moist sand or soil; if sand cannot be obtained, in a cool cellar. The celery is packed closely with the roots imbedded in the sand. Several other methods of keeping celery have already been suggested. Here as with the other vegetables considered in this short bulletin, there are many other plans for storage in which the details differ greatly. Low temperature, proper moisture conditions and ventilation are essential and should be secured.

Squashes and Pumpkins.—The farm family may enjoy squash and pumpkin pie made from fresh specimens if the proper attention is given to harvesting and storing them. Care must be taken that no bruises or scratches whatever are caused. The pumpkins and squashes must be matured and harvested before hard frosts appear and a short stem should be left on each. If possible they should be allowed to ripen and harden for 2 or 3 days before they are removed from the field. Then they should be stored on shelves or racks in rooms that are dry and warm, 50 to-60 degrees being about right. The storage of this class of vegetables is, therefore, quite different from that of the other so far considered.



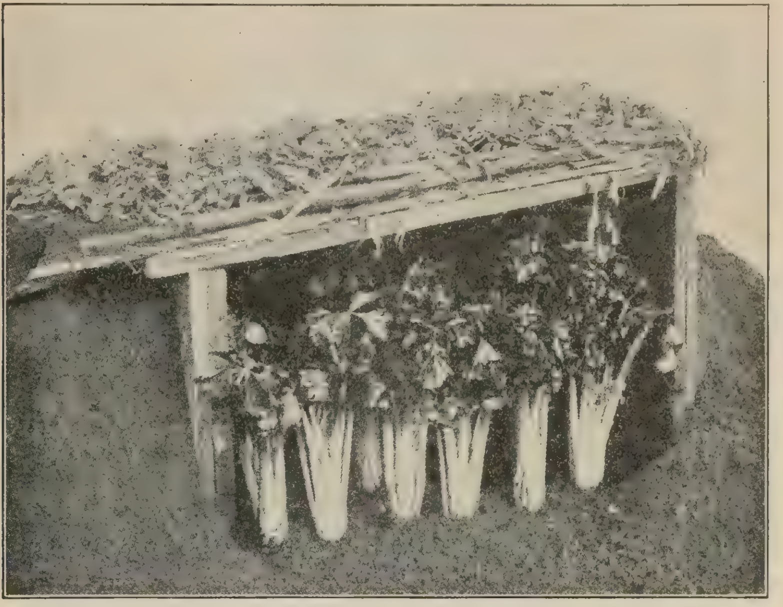
Method of storing cabbage on a small scale

Onions.—Thoro curing is necessary to insure the keeping of onions. After being pulled the onions are allowed to remain on the ground for several days. If they are removed to a shed and kept in open crates for a week or two more, the curing will be continued. They should be topped but not too closely. Soft onions should be discarded for storage purposes. Onions must be kept cool but dry. Good ventilation is essential and freezing must be avoided. An attic where the temperature does not fall below 32 degrees would be a good place for keeping onions.

Potatoes.—Irish potatoes should be well matured before harvesting. They will keep better if allowed to dry first in the open for a few hours and then in some airy place for a few days before they are put in the cellar, where they are usually stored. Potatoes from blighted vines are not good keepers.

Sweet potatoes should be dug before the vines are frosted. Then they should be put into a warm room with the temperature over 80 degrees and "sweated" for 10 days or so. After that they may be kept in a dry warm room, with conditions similar to those needed for squashes and pumpkins.

Tomatoes.—At the close of the season when the first frosts come, many tomato vines have on them green tomatoes. Some of these may be used for pickles, but, if desired, some of them may be ripened indoors. The whole vine should be taken up before frosted and hung upside down in a warm cellar or room. The tomatoes will ripen gradually and fresh ones may be had well through November, depending on the time when they were brought in.



Storing celery in a cold frame

Parsley, Mint, Spinach.—Parsley may be stored in cold frames for winter use, or it may be dug and transplanted into boxes or pots and these brought indoors. A fresh supply is thus always available. Mint may be treated likewise.

Spinach may be stored in the open ground in early fall for early spring use. It should be protected from alternate thawing and freezing by covering it lightly with leaves and litter which are to be removed early in the spring.

FORCING OF VEGETABLES

It is possible and not at all difficult to have fresh rhubarb and asparagus during the winter. As both these vegetables are great favorites, it is well to know how easily they may be had. No special equipment is necessary. The proper temperature and moisture can be obtained in nearly any farm home. Darkness is almost an essential, but a portion of a room or the cellar can usually be curtained or boarded off so as to exclude a greater portion of the light.

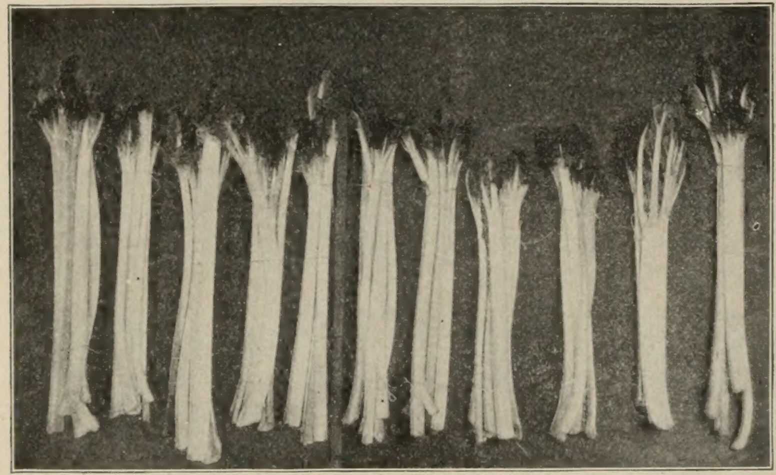
Ready to hang in the cellar to supply tomatoes several weeks after frost.

Forcing of Rhubarb.—The rhubarb bed on many farms is so large that much of it is allowed to go to waste every year. Some of this could be utilized nicely during the winter. Before the ground is frozen in the fall, good strong crowns should be lifted and left out of doors until frozen solid. The only objection to the ground being frozen is that it is much harder to lift the crowns, or rhubarb roots, from frozen ground. About 6 or 7 weeks before the stalks are wanted for sauce or for pies, these frozen crowns should be taken into the cellar and imbedded right side up in moist earth. The room should have a temperature of 50 degrees or more if possible. The stalks will begin to grow in a short time and they may be cut until the crown shows signs of exhaustion. These crowns may be refrozen and returned to the garden in the spring if desired. A dozen good crowns will supply the ordinary family.

A rhubarb crown ready to be taken to the cellar for forcing.

A corner in the cellar where rhubarb crowns are forcing.

Forcing of Asparagus.—The method of forcing asparagus is essentially the same as that for the forcing of rhubarb. Strong healthy roots, 3 years old or older should be dug before the ground is frozen hard. These are generally stored in sand in a cool place until taken to the place for forcing. It does not injure the roots to be frozen but they must not be subjected to alternate freezing and thawing. In the forcing room or cellar they are set on a few inches of earth and covered with from 3 to 6 inches. The soil is packed around the roots and must be kept moist at all times. Asparagus tips should be ready for cutting in about 12 weeks after the forcing is started and may be kept up for 3 or 4 weeks. The temperature should be maintained between 55 degrees and 65 degrees. When forcing is carried on every year, the supply of roots must be anticipated by sowing seed several years in advance.



Rhubarb stalks forced in a dark cellar during the winter.

Use of Hotbeds and Cold Frames in Forcing.—The limited scope of this bulletin will not allow details regarding hotbeds and cold frames, but by making use of them, it is possible to have fresh vegetables of various kinds, such as lettuce, radishes, spinach, parsley, onions, and a few others, later in the fall and earlier in the spring than is possible without their use. However, they require considerable care during the winter, but the results in early and late vegetables certainly repays for this care and trouble.

This bulletin may be secured by writing to J. E. McClintock, Supervisor of Publications, College of Agriculture, Columbus, Ohio.